

THREE DIPTERA FROM THE MIOCENE OF COLORADO.

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Atrichops hesperius, n. sp. (Leptidæ).

Length 6 mm., wing 5 mm.; robust, of the usual form: tarsi microscopically hairy, not at all bristly or spiny; wings clear or almost, the venation as preserved pale reddish. Venation as in *Atrichops crassipes* (Meigen), except as follows: Auxiliary vein reaching costa distinctly before middle of wing; end of subcostal cell larger; base of second posterior cell more oblique; anal cell not so broad. The anal cell is closed a short distance before the wing-margin. The long second submarginal cell has its lower side measuring about 2560 microns. The anterior cross-vein is about 290 microns from basal corner of discal cell. Florissant; Station B 13 (*S. A. Rohwer*).

The shape of the wings and the details of the venation place this species in *Atrichops* Verrall, rather than in *Atherix*. *Atrichops* has hitherto contained a single living Palearctic species, so it is interesting to find it in the Miocene of America. It is less pubescent than *Atherix* (and in this the fossil also agrees) and the venation is on the whole less specialized.

Xylomyia moratula, n. sp. (Leptidæ).

Length 6 mm., wing about $5\frac{1}{2}$; of the usual form; head and thorax black, abdomen light reddish; legs reddish brown; tibiae and tarsi not at all spinose or bristly; wings hyaline; venation as preserved light reddish. Venation like that of *X. maculata* (Meigen) with the same wide open second submarginal cell and arched upper side of second posterior cell, though the latter feature is not quite so extreme as in *X. maculata*. The anterior cross-vein is near to the base of the discal cell as in *X. maculata*; the closer fourth posterior cell is relatively narrow apically as in *X. marginata* (Meigen), but its side on the third posterior, though long, is shorter than its side on the discal cell, the reverse being true of *marginata*. The insect is therefore entirely of the type of *X. maculata*, as opposed to that of *X. marginata*, which is perhaps hardly congeneric.

The following wing measurements are in microns: Length of lower side of second submarginal cell about 1695; base of second submarginal to anterior cross-vein about 1570; level of end of upper

side of second submarginal basad of level of end of lower side, 400, and width of cell at this point 530; width of second submarginal 640 from end of lower side, 432; width of first posterior cell at apex 640, of second at apex 320, of third at apex 1250; discal cell on first posterior 960, on first basal 225; basal side of second posterior 160, of third posterior 272; closed apex of fourth posterior to wing margin about 240, of anal to wing margin apparently over 320, but margin at this point not visible; width of anal at level of basal corner of fifth posterior 480. Florissant; Station 13 (*S. A. Rohwer*.)

This genus has been referred by Osten-Sacken, Verrall and others to the Stratiomyidæ, but Williston places it in Leptidæ. The genera *Arthropeas* and *Arthropiella*, which Meunier places in a distinct family, are apparently related; they occur in Baltic amber. Verrall states that the larva of *Xylomyia* shows that it belongs with the Stratiomyidæ rather than with the Leptidæ. On the whole, it seems probable that *Xylomyia*, *Glutops*, *Arthroceras*, and probably the two amber genera, should together form a distinct family.

***Saropogon oblitescens*, n. sp. (Asilidæ).**

Wing about $7\frac{1}{2}$ mm. long; fourth posterior and anal cells closed; small cross-vein from base of second submarginal cell 1040 microns, but second submarginal cell over 1440 long (apex gone); second submarginal cell, so far as visible, narrow, parallel-sided, its width (depth) about 290 microns; small cross-vein 1230 microns from base of discal cell, and 800 from its apex; separation of second and third veins 1230 microns from origin of their common stem from first; fourth posterior cell closed about 130 microns from margin, anal the same distance, but apex of anal a much smaller angle than apex of fourth posterior; apical sides of discal cell very unequal, that on second posterior cell twice as long as that on third; apical angle of discal cell very much greater than a right angle. Wing clear, venation, dark brown. Compared with *Saropogon dispar*, the fossil differs in having the fourth posterior and anal cells closed well before the margin, and the second posterior distinctly narrower, but otherwise the venation is about the same. The venation is in general very like that of *Selidopogon diadema*, but that has the second posterior cell more widely open, and the subcostal cell larger. Florissant (University of Colorado Expedition).